

ABSTRACT OF THE DISCLOSURE

An apparatus and method for heating materials or substances in an oven at an oven temperature below their melting and/or vaporization points to either melt and/or vaporize the substance. Substances are inserted into a substantially spherical envelope. The envelope is sealed at a preset pressure. The solid is heated in an oven at an oven temperature substantially below the melting or vaporization temperature of the substance at the preset pressure for a time sufficient to either melt or vaporize the substance.